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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,586	10/08/2004	Age Kyllingstad	1935-00144	1894
26753	7590	11/16/2005	EXAMINER	
ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202			WACHSMAN, HAL D	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/510,586	KYLLINGSTAD, AGE
	Examiner Hal D. Wachsman	Art Unit 2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 October 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 October 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-8-04.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

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1. The drawings are objected to because the figure on sheet 2/2 of the drawings is not labeled as "Fig. 2". Also labeling (i.e. in words) is needed in both figures 1 and 2 so as to facilitate an understanding of the invention from the drawings. In addition, the drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method of detecting a leak in reciprocating machinery (i.e. such as in a flow chart) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The declaration is objected to because the "Given Name" block has not been filled out. Appropriate correction is required.
3. In both the Abstract and the claims, the reference numerals are not necessary and should be deleted.
4. Claims 1-4 are objected to under 37 C.F.R. 1.75(i) because each element or step of these claims are not separated by a line indentation. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 states "A method of detecting a leak in reciprocating machinery...*comprising at least two pistons..*" and thus as the body of the claim is written there is ambiguity with respect to whether the body of the claim contains the steps of a method or apparatus limitations. In addition, although the preamble of claim 1 indicates the detecting a leak there is no final conclusion in the claim that a leak has been detected. *This same type of problem also occurs in claim 3.* Claim 1, lines 3-4, cite "characterized in that the volume flow at least out of the reciprocating machinery..is monitored and analyzed..." which is indefinite because it is not clear with respect to

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what else the volume flow can be coming out of in addition to coming out of the reciprocating machinery. Claim 1, lines 4-5, cite "..is monitored and analysed, e.g. by means of Fourier analysis..." however a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "is monitored and analysed, and the claim also recites "e.g. by means of Fourier analysis" which is the narrower statement of the range/limitation. Claim 1, lines 6-7, cite "..in order to make it possible to detect a flow component.." however the wording "make it possible" implies that the flow component may or may not be detected. Claim 2, line 4, cites "a flow component" however is this the same flow component previously referred to in claim 1 ? Claim 2, lines 7-8, cite "the leak associated with the flow frequency component in question" which lacks clear antecedent basis. *This same type of problem also occurs in claim 4.* The last 2 lines of

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claim 2 cite "the relationship between the flow frequency component and the shaft/cam angle of the reciprocating pump" which does not particularly point out exactly what constitutes the "relationship". *This same type of problem also occurs in claim 4.* In addition, "the reciprocating pump" lacks antecedent basis. *This same type of problem also occurs in claim 4.* Claim 3, line 7, cites "the measuring device" however the antecedent basis is "at least one measuring device".

7. The following references are also cited as being art of general interest:  
Goldowsky (6,068,588) which discloses a pump with a fundamental natural frequency,  
Modera et al. (4,635,469) which disclose measuring the tightness of enclosures,  
Kosmala et al. (5,146,433) which disclose the use of Fourier analysis in a mud pump  
noise cancellation system, Nelson et al. (5,091,716) which disclose a liquid line leak  
detection apparatus and Cikanek, Jr. et al. (5,927,243) which disclose an internal  
combustion engine with multiple pistons.

8. No claims are allowed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D. Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hal D Wachsmann  
Primary Examiner  
Art Unit 2857

HW  
November 13, 2005